


## The Under Secretary of Energy

Washington, DC 20585

November 9, 2005

MEMORANDUM FOR JAMES A. RISPOLI  
ASSISTANT SECRETARY FOR ENVIRONMENTAL  
MANAGEMENT  
RAYMOND L. ORBACH  
DIRECTOR, OFFICE OF SCIENCE  
R. SHANE JOHNSON, ACTING DIRECTOR  
OFFICE OF NUCLEAR ENERGY, SCIENCE  
AND TECHNOLOGY

FROM: DAVID K. GARMAN   
UNDER SECRETARY FOR ENERGY,  
SCIENCE AND ENVIRONMENT

SUBJECT: Work Planning and Work Control Assessments and Site  
Action Plans for Defense Nuclear Facilities Safety  
Board Recommendation 2004-1, Commitment 23

This memorandum provides my expectations for completion of Commitment 23 of the Department of Energy's (DOE) Implementation Plan (IP) for the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*, by February 28, 2006. Commitment 23 is focused on improvement in consistency and reliability of work planning and work control performance at the activity level. The need for additional improvement in work planning and work execution at the activity level has been identified by internal self-assessments, line and independent oversight, and DNFSB oversight.

To accomplish the necessary improvement, our approach will be to promote local ownership of the problems and solutions. Specifics are in the IP and include initial assessments by DOE field elements and contractors to evaluate the effectiveness of work planning and work control processes at the activity level. Based on these assessments, contractors and DOE field elements will identify specific areas where improvement is needed and may identify recommended solutions. DOE field elements and contractors will identify specific actions that they will pursue to correct identified weaknesses and deficiencies, specific schedules for completing these actions, and specific actions to continue to monitor performance in these areas.



I am directing that the attached Work Planning/Work Control Criteria and Review Approach Document (CRAD) be used for the assessments. The CRAD is also available on-line at the 2004-1 Knowledge Portal ([www.2004-1.org](http://www.2004-1.org)). Site action plans are to be developed based on the results of the assessments, and a session will be held to share the pertinent strengths and weaknesses. Action plans will be sent to each respective cognizant Headquarters (HQ) program secretarial office for review and approval. Draft action plans are to be submitted to HQ by January 13, 2006. A session to share the pertinent issues will be held in late January 2006 so that the site action plans can be approved and submitted by the Site Managers by February 8, 2006. My staff will review the action plans prior to my forwarding them to the DNFSB no later than February 28, 2006.

It is my expectation that sites will leverage recent assessments (e.g., Chief Nuclear Safety reviews, Office of Independent Oversight and Performance Assurance assessments, Integrated Safety Management System reviews) as input for the assessments and incorporate corrective actions and other ongoing initiatives into their site action plans. Since these assessments were not based on the attached Work Planning/Work Control CRAD, sites will need to ensure that all criteria of the CRAD have been properly assessed. The Energy, Science and Environment task lead for Commitment 23 is Dr. Charles O'Dell, Office of Integrated Safety Management and Operations Oversight. Dr. O'Dell will be contacting the previously identified HQ and site leads to provide further clarification on the lines of inquiry for the site action plans. He can be reached at (202) 586-0564.

As this effort moves forward, minor changes or revisions may be required to the Work Planning/Work Control CRAD. These changes and additional direction regarding site action plans may be approved by the Chief of Nuclear Safety Chip Lagdon. He can be reached at (202) 586-9471.

#### Attachment

cc:

Assistant Secretary for Fossil Energy  
Director, Office of Civilian Radioactive Waste Management  
Assistant Secretary for Energy Efficiency & Renewable Energy  
Assistant Secretary for Environment, Safety and Health  
Director, Office of Legacy Management

## **WORK PLANNING AND WORK CONTROL**

**FUNCTIONAL AREA GOAL:** Improvement in the consistency and reliability of work planning and work control performance at the activity level (for this document, activity level refers to work tasks in the area of operations, maintenance, construction/destruction, and research and development).

### **REQUIREMENTS/REFERENCES:**

- DOE Order 226.1, Implementation of DOE Oversight Policy
- DOE Order 5480.19: Conduct of Operations
- DOE Order 414.1C: Quality Assurance
- DOE Order 440.1A: Worker Safety and Health
- 10 CFR 830.122(b): Quality Assurance
- DOE Manual 426.1-1A, Chg 1, Federal Technical Capability Manual
- DEAR Clause 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution

### **INTRODUCTION:**

This procedure is the base document for developing and conducting an assessment of the Work Planning/Control Program at Energy, Science, and Environment (ESE) sites. It should be considered the minimum acceptable effort for performing assessments of Work Planning/Controls. The Objectives and Criteria contained in this document were largely based on DOE Policy 450.4, Integrated Safety Management, and lessons learned from EM closure sites. A site may take credit for all or part of individual Criteria and Review Approach Documents (CRADs), if appropriate documentation can be provided that verifies that CRADs, Objectives, and/or Criteria used in site assessments, performed within the last 12 months, were equal to or more rigorous (scope and detail) than the stated CRADs, Objectives, and/or Criteria in this document.

The individual sites may make minor changes to this base document to coincide with their field element terminology (e.g., document titles, organization, and position titles). Although additional Objectives or Criteria may be added, deletion of established Objectives and Criteria is not permitted without written authorization from the appropriate Program Secretarial Office.

### **Performance Objective WPC-1: Work Planning and Control Oversight**

The DOE field element has an established process that ensures effective oversight of the contractor's work planning and control process.

Criteria:

1. There is documentation that delineates the roles and responsibilities for DOE field element personnel performing oversight of the contractor's work planning and control process.
2. DOE field element management has established the requirement for oversight of all stages (e.g., planning walk downs, Job Hazard Analysis (JHA) meetings, field execution, etc.) of the work planning and control process.
3. The DOE field element management has designated appropriate personnel (e.g., safety and health, facility representatives, project, etc.) to perform oversight of the contractor's work planning and control process. Designated personnel have received adequate training or were selected based on their experience and knowledge of the work planning/ control process.
4. The field element has a formal system that documents the efforts of their personnel performing oversight of the contractor's work planning and control process.

REVIEW APPROACH (for the initial baseline):

Document Review:

- Policy or procedure establishing personnel roles and responsibilities for the oversight of the contractor's work planning and control process.
- List of designated personnel performing oversight of contractor's work planning and control process.
- Documentation regarding the field element's efforts in the oversight of the contractor's work planning and control process.

Interviews:

- DOE Field Element Manager
- Facility Representative Supervisor
- Safety and Health Manager
- Field Element Oversight Activity Coordinator

Observations:

Not Applicable.

**Performance Objective WPC-2: Work Planning and Control Oversight**

The DOE field element performs effective oversight of the contractor's work planning and control process.

Criteria:

1. The field element has scheduled periodic oversight activities (e.g., assessments, surveillances, observations, etc.) of the contractor's work planning and control process. These activities are of sufficient scope, detail, and quantity that the field element can ascertain the status of the contractor's work planning and control process.
2. The scheduled oversight activities are conducted during all stages of work planning and control process (e.g., planning walk downs, JHA meetings, field execution, etc.), and are chosen based upon the degree of risks, hazards, and complexity of the work activity.
3. The field element tracks and trends the results of oversight activities performed on the contractor's work planning and control process and takes appropriate actions.

REVIEW APPROACH (for the initial baseline):

Document Review:

- The field element Assessment Schedule.
- Documentation of oversight activities performed on the contractor's work planning and control process.
- Field element tracking and Trending documentation of the contractor's work planning and control process.
- Actions taken due to the results of the Tracking and Trending data.

Interviews:

- Line Management
- Work Control Program Lead/Manager
- Facility Representative Supervisor
- Facility Representatives
- Safety and Health Manager
- Designated oversight personnel
- Field Element Oversight Activity Coordinator

Observations:

- Field element staff performing oversight of each stage (e.g., planning walk downs, JHA meetings, field execution, etc.) of the contractor's work planning and control process

**Performance Objective WPC-3: Work Control Program Documentation**

The contractor has developed an effective work planning and control process.

Criteria:

1. Contractor work control manual/procedure for initiating, analyzing, and developing work control documents, including job hazard analysis, is approved and implemented.
2. The contractor's work control process establishes the level of review and approval for different types of work control documents. The type of document chosen is based upon the degree of risks, hazards, and complexity of the work activity.
3. The contractor has established work planning/control requirements for all personnel performing work at their site, including subcontractors. Affected personnel are trained on these requirements.
4. The contractor's work control manual/procedure includes turnover requirements when line management and/or first line supervisor responsibilities are transferred.

5. The contractor's work control manual/procedure includes a process for lessons learned/feedback during the execution of work control activities, including incorporation of lessons learned into active and in-development work control documents.
6. The contractor's work control manual/procedure includes a process for post work activity review, including incorporation of lessons learned into active and in-development work control documents and/or work control manual/procedure.
7. The qualification requirements for Work Control Managers and Planners are established.
8. Records that document the successful completion and qualification of Work Control Managers and Planners are retained and auditable.

REVIEW APPROACH (for the initial baseline):

Document Review:

- Contractor Work Control Program Manual/Procedure.
- Work Control Manager Qualification Records.
- Work Control Planner Qualification Records.

Interviews:

- Contractor Work Control Manager

Observations:

Not Applicable.

**Performance Objective WPC-4: Work Planning and Control Activity**

**Definition and Hazard Identification**

Proposed work activities are adequately defined and analyzed to identify hazards and their associated controls.





Criteria:

1. Initial discussion/walk down of the proposed work activity is performed by appropriate personnel (e.g., line management, engineer, planner, etc.) to ensure that the work is properly scoped and that boundaries are understood.
2. A team (team) comprised of the appropriate personnel (e.g., planner, work supervisor, workers, safety and health Subject Matter Experts, etc.) is selected by line management to participate in the development of the work control document.
3. The team performs effective walk downs and Job Hazard Analyses in order to develop work steps/techniques and identify possible hazards and their associated controls.
4. The team considers potential upset conditions, accidents, and “what if” scenarios and their consequences during the walk downs and JHAs.
5. The team selects controls based upon the following hierarchy: (1) hazard elimination/reduction, (2) engineered controls, (3) administrative controls, and (4) personal protective equipment.
6. The team ensures that the level of control established for a hazard is maintained throughout the activity or until the hazard has been eliminated or reduced (controls can be graded to level of hazard reduction). [This Criteria addresses potential loss of safety function during D&D and may not be applicable to all work activities]
7. The team evaluates the possibility of creating additional hazards due to selected controls (i.e., excessive PPE causing heat exhaustion) and also evaluates the possibility of negative synergistic effects of selected controls.

REVIEW APPROACH (for the initial baseline):

Document Review:

- Approved work control documents.
- Contractor’s work control manual/procedure.

Interviews (if applicable):

- Work Control Planner
- Work Control Manager
- Engineers
- Job Supervisor
- Workers
- Radiological Safety
- Occupational Safety/Industrial Hygiene
- Nuclear Safety
- Criticality Safety
- Quality Assurance
- Waste Management
- Fire Protection
- Safeguards and Security

Observations:

- Work planning team walk down.
- JHA walk down/meeting (if separate from work planning walk down).

### **Performance Objective WPC-5: Work Planning and Control Process**

The contractor work planning process generates work control documents that lead to safe and efficient completion of work activities.

#### Criteria:

1. The work scope and associated boundaries are clearly defined.
2. The work control document is written in a clear, concise, and worker friendly manner.
3. The work steps for activities are properly sequenced.
4. Work control documents adequately incorporate technical and administrative requirements (e.g., contract, safety basis, regulatory, consensus codes, etc.).
5. Work hazard controls identified in the JHA have been incorporated into the work control document.

6. The controls for activity specific hazards are delineated immediately before the work control document step where the hazard is encountered and are highlighted to emphasize their importance.

REVIEW APPROACH (for the initial baseline):

Document Review:

- Approved work control documents.
- Contractor's work control manual/procedure.

Interviews:

- Work Control Planner
- Work Control Manager
- Job Supervisor
- Workers
- Radiological Safety
- Occupational Safety/Industrial Hygiene
- Nuclear Safety
- Criticality Safety
- Quality Assurance
- Waste Management
- Fire Protection
- Safeguards and Security

Observations:

- Work control document team walk down.
- JHA meeting (if separate from walk down).

Performance Objective WPC-6: Work Planning and Control Oversight

Contractor personnel perform work in accordance with approved work control documents.

Criteria:

1. First line supervisors and workers are knowledgeable of their work control documents and meet all applicable training and medical requirements.

2. Operations work control authority reviews and authorizes all work control documents prior to commencement of work. He/she is required to evaluate all work at a facility and/or site to ensure work activities of one scope do not adversely affect the safe work of another.
3. Effective pre-evolutionary briefings are performed.
4. First line supervisors and workers follow work control document instructions as written, or if unexpected conditions arise, workers and supervisors take action to stop the work and follow their change control process.
5. First line supervisors and workers understand their stop work authority.
6. Work control documents contain adequate documentation (i.e., work status log) regarding work status including the nature of and response to unexpected conditions.
7. Lessons learned/feedback is incorporated into active and in-development work control documents in a timely manner.

#### REVIEW APPROACH (for the initial baseline):

##### Document Review:

- Approved work control documents.
- Pre-evolution briefing documentation.

##### Interviews:

- Operations Work Control Authority
- Work Control Planner
- Work Control Manager
- Job Supervisor
- Workers
- Lessons Learned Coordinator

##### Observations:

- Work activities governed by a work control document.
- Pre-evolution briefing.

### Performance Objective WPC-7: Work Planning and Control Oversight

The Contractor has an established process that requires line management and assessment personnel perform timely assessments/surveillances of the work planning and control process, including periodic reviews of active and in-development work control documents.

#### Criteria:

1. The contractor has scheduled and performed independent and self-assessment of the work planning and control process. These activities are of sufficient scope, detail, and quantity that the contractor can ascertain the status of their work planning and control process.
2. Line managers periodically perform surveillances, which include the observations of job walk downs and JHA walk downs/meetings, pre-evolution briefings, and work performed to work control documents.
3. Line managers periodically review in-development and approved work control documents.
4. The contractor tracks and trends the results of oversight activities performed on their work planning and control process and takes appropriate actions.

### REVIEW APPROACH (for the initial baseline):

#### Document Review:

- Contractor assessment schedules.
- Completed assessments of work planning and control process.
- Line managers' work planning and control surveillance documentation.
- Line managers' work control document review documentation.
- Contractor tracking and trending documentation of their work planning and control process.
- Actions taken due to the results of the tracking and trending data.

Interviews:

- Assessment Manager
- Assessors
- Assessment Schedule Coordinator
- Line managers

Observations:

- Performance of a work planning and control independent assessment (if available).
- Performance of a work planning and control self-assessment (if available).
- Performance of line managers' work control surveillance.